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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,637	07/23/2003	Kurt M. Schroeder	85677D-W	8069

7590 11/13/2006
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EXAMINER

HYUN, PAUL SANG HWA

ART UNIT PAPER NUMBER

1743

DATE MAILED: 11/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/625,637		SCHROEDER ET AL.	
	Examiner		Art Unit	
	Paul S. Hyun		1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-23 and 40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 24-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

REMARKS

Claims 1-40 are pending. Claims 1-23 and 40 have been withdrawn from consideration as being drawn to a non-elected invention.

Claims 24, 31 and 32 were amended to fix grammar mistakes. The amendments did not change the scope of the claims.

The objections to the claims cited in the previous Office action have been withdrawn in light of the amendments made to the claims.

The art rejection cited in the previous Office action is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims **24-39** are rejected under 35 U.S.C. 103(a) as being unpatentable over Rembaum et al. (US 4,929,400) in view of Mihara et al. (US 4,331,444) and de Jaeger et al. (US 4,837,168).

Rembaum et al. disclose polymeric microspheres adapted to be used for immunoassays and a method for producing them. The reference discloses that the microspheres are acrylic (see Abstract) and can range from 1000 Angstroms to 100 microns in size (see line 14, col. 6). Each microsphere comprises functional groups (i.e. aldehyde) capable of binding proteins (see line 65, col. 7) and a dye for visually

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detecting the microspheres (see lines 26-30, col. 7). However, the reference does not disclose that the dye comprises a photographic coupler.

De Jaeger et al. disclose latex label adapted to be used for immunoassays. The latex particles are coupled to dye-forming couplers that can be developed to form cyan, magenta or yellow dyes. The dyes are used to visually detect the occurrence of a reaction of interest. The reference discloses that phenol or a naphthol type compounds produce cyan dyes, pyrazolone type compounds form magenta dyes and open chain ketomethylene type compounds form yellow dyes

Mihara et al. disclose a method for immunoassay using a phenol or a naphthol coupler, a pyrazolone coupler, and an open chain ketomethylene coupler that are developed by oxidizing developing agents to form cyan, magenta or yellow dyes, respectively (see line 55 col. 8 – line 43 col. 9). The reference discloses that the couplers are dissolved in high boiling solvents (i.e. dibutyl phthalate) before the solution is applied to the target substrate or support (see lines 3-25 col. 10).

It would have been obvious to one of ordinary skill in the art to dye the microspheres disclosed by Rembaum et al. with the dye-forming couplers dissolved in high boiling solvents disclosed by Mihara et al. and de Jaeger et al. since the 3 dye colors provide versatility and diversity in detection.

Response to Arguments

Applicant's arguments with respect to the rejection of claims 24-39 have been fully considered but they are not persuasive. Applicant's argument that there is no

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motivation or likelihood of success for combining the references cited in the rejection is not persuasive.

There is motivation for combining the three references. Rembaum et al. disclose polymeric microspheres comprising a dye for visually detecting the microspheres (see lines 26-30, col. 7). The particles disclosed by Rembaum et al. and the claimed invention are distinct in two ways: 1) the dye disclosed by Rembaum et al. differs from the dye of the claimed invention; and 2) the microsphere disclosed by Rembaum et al. lacks a high-boiling solvent.

De Jaeger et al. disclose latex particles adapted to be used for immunoassays. The latex particles are coupled to dye-forming couplers that can be developed to form cyan, magenta or yellow dyes. The reference discloses that phenol or a naphthol type compounds produce cyan dyes, pyrazolone type compounds form magenta dyes and open chain ketomethylene type compounds form yellow dyes.

In light of the disclosure of de Jaeger et al., it would have been obvious to substitute the dye disclosed by Rembaum et al. with the dye disclosed by de Jaeger et al. because the dye combination disclosed by de Jaeger et al. provides versatility and diversity in detection.

Mihara et al. disclose a method for immunoassay using a phenol or a naphthol coupler, a pyrazolone coupler, and an open chain ketomethylene coupler (see line 55 col. 8 – line 43 col. 9). The dyes disclosed by Mihara et al. are identical to the dyes disclosed by de Jaeger et al. Mihara et al. disclose that the couplers can be dissolved in

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high boiling solvents (i.e. dibutyl phthalate) before the solution is applied to the target substrate or support (see lines 3-25 col. 10).

In light of the disclosure of Mihara et al., it would have been obvious to one of ordinary skill in the art to dissolve the dyes disclosed by de Jaeger et al. in dibutyl phthalate and then apply the solution to the microspheres disclosed by Rembaum et al. to simplify the application process of the dyes to the microspheres.

There is also likelihood of success in combining the references. The only modification made to the microspheres disclosed by Rembaum et al. is the dyes coupled to the microspheres. One of ordinary skill in the art would have recognized a way to couple the dyes disclosed by de Jaeger et al. and Mihara et al. to the microspheres disclosed by Rembaum et al., especially since the microspheres disclosed by Rembaum et al. comprise functional groups for binding complimentary functional groups.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul S. Hyun whose telephone number is (571)-272-8559. The examiner can normally be reached on Monday-Friday 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PSH
11/02/06


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